

ON XANTHÆCIA BUFFALOENSIS GRT. AND
PAPAIPEMA LATIA STRK.

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But few of the noctuid moths described by Grote from the eastern United States have seemed more elusive or entirely submerged in oblivion since being first exploited than *Xanthæcia buffaloensis*. Described by him in 1877 (Can. Ent., IX, 88) the single example constituting his type was ultimately deposited in the British Museum and American students generally were unfamiliar with its exact habitus. Until the appearance of Hampson's Catalogue, Vol. IX, 1910, the species had never been figured and as it was known to approach a certain section of the numerous *Papaipema* group, left an uncertainty which its further non-appearance failed to excite. The type example is presumed to have been a capture at light, but if bred no reference was made to the fact or to the food-plant. Its larva is beyond question a borer in some herbaceous stem or root, with a habit and life cycle similar to the *Papaipema* larva, and when the writer's investigations of the latter led to Buffalo, N. Y., the type locality of *buffaloensis*, this species was kept particularly in mind. While another Grote species, *P. necopina*, described from this locality in 1876 and long misunderstood, was found to be flourishing in larval abundance, no sign or intimation of *buffaloensis* could be detected. Grote had described the species under the generic group *Ochria*, associating with it his species *sausalita* from California and considered them congeneric with *O. flavago* of Europe. In Hampson's recent studies the new genus *Xanthæcia* has been created for *buffaloensis* and *flavago*, their form of thoracic cresting and tuberculate frons differing from either *Papaipema* or *Hydræcia*, which have the head smooth in front. *Flavago* seems to be common and widely distributed, has been known for a century, and its list of food-plants includes *Carduus*, *Arctium*, *Verbascum*, *Artemisia*, etc. Such a list gives little clue, if an analogy be drawn with *Papaipema*, for it would suggest that such cosmopolitan weeds are those used by the latter when a substitute becomes necessary for their preferred, indigenous food-plant. The very rarity of *buffaloensis* might argue that it does not make a choice

among such common weeds, though the probability that it might work in any aquatic plant would be dissipated. The European flora now supporting *flavago* can be little like primordial conditions whereas we may expect to find *buffaloensis* still boring its primitive food-plant. Failure to discover this larva at Buffalo served to intensify interest in the species, so it was with much gratification that an example from Mr. F. Marloff, taken at Oak Station, Pa., October 1, 1910, was recently identified for him as the lost Grote species. In replying to congratulations over the re-discovery Mr. Marloff stated he had captured the specimen at a street lamp, in a prolific locality where a roadway winds down from the high country into a valley. At this point *Papaipema furcata*, *P. merriccata* and *Chaphora fungorum* have been taken, the varied flora of the immediate vicinity offering special advantages for the commingling of desirable species.

There could not be dispelled, however, the notion that the insect had been seen before and the impression finally became strong that in *Papaipema latia* Strk. we had previously met a counterpart. Some years ago Stecker's type of *latia* had been seen and upon comparing my notes and pencil sketch of the same with the Marloff specimen and Hampson's figure it seemed quite clear that but one species could be involved. Though the type of *latia* was not examined for a tuberculate frons, my note reads: "It seems probably an *Ochria*." Still further confirmation was needed and application was made to Mr. W. J. Gerhard, of the Field Museum, Chicago, who has the Strecker collection in charge. He very kindly compared *latia* type with Hampson's figure of *buffaloensis*, following my suggestion to examine for a tubercle on the frons of *latia*.

Mr. Gerhard reports that my surmise is undoubtedly correct, stating that he "fails to see any difference that would justify anyone in regarding them as being two distinct forms." The slight difference he can detect is that Strecker's type is less highly colored and that the postmedial line is more fasciate than Hampson's figure, both of which features were apparent in the Marloff specimen. Most important of all, he states that "the front between the eyes has a distinct tubercle, which, however, is not so pronounced as on the other species of the genus, namely, *flavago* of Europe, which was likewise examined." Had *latia* a smooth frons no matter how close the superficial resemblance, it would remain distinct from *buffaloensis*, but with the

tubercle and the other features agreeing, there is no room for question.

Strecker described *latia* as an *Hydracia* in 1899 (Lep. Rhop. & Het., Suppl. 2, p. 6), so the earlier Grote name must be retained. Its early history is unknown, and but one other example identified as such, is all that the writer recalls having knowledge of. So the quest for two rarities merges into one, a thing to be thankful for when we are seriously pursuing larval histories.

ANOTHER SPECIES OF PERO HERR. SCHAEF.

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In Proceedings of U. S. National Museum (Vol. 38, pp. 359-376) Mr. J. A. Grossbeck has recently published a very thorough and excellent paper, separating the various species formerly massed as one under the old genus *Azelina* Hub., and placing them under the genus *Pero* Herr Sch., where they rightly belong. The inclusion of *occidentalis* Hulst (*Marmarica*) and of *colorado* Gross., both having dentate antennæ in the males, does not accord with my present opinion, but it does not detract in any way from the value of the service he has performed. In concluding a brief summary of results, he remarks (page 360) "that several examples have been treated as geographical races, but may yet be found to be distinct." One of these I have received since my material was submitted to him in a series of nearly one hundred, including both sexes. Mr. Grossbeck, who has seen them, advises me that he had several poor specimens before him, but the similarity in genitalia to *modestus* Gross and the paucity of his material deterred him from separating them from it at that time. It is to be noted that the home of this new species is in northern Utah, while *modestus* occurs most plentifully in southern and central Arizona, though I have one straggler from Durango, Col. All of my specimens were taken from May 7 to June 24, excepting a single pauperized male on August 3, while my large series of *modestus* were captured in September and October. Apart from their apparent unlikeness when the groups are contrasted, they can not be seasonal